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MAIN FACADE—MUNICIPAL BUILDING, PLAINFIELD, NEW JERSEY.
Mr. Bottomley might be called a classicist by training and a romanticist by temperament, if the terms did not beg so many questions. The formulas of old controversies apply only to mislead, in a time and place like our own, composed of inextricably blended streams of influence. It is not today so much a question of sources, single or varied, simple or complex, classic or gothic, but rather of things academic, or things picturesque; of old principles that are sound but dry, contending with the growths of a fresh feeling.

Mr. Bottomley had a long, severe training for his profession in the École des Beaux Arts at Paris, at Columbia University and in the American Academy in Rome; and there learned to reduce green ideas to the precision of diagrams; to admire the great monumental buildings and more monumental traditions. But he had an innate liking for things picturesque, which experience has developed against the background of that training. He seeks the picturesque in the classic tradition. And certainly — it is there! It is not the medieval only that produced peculiar doorways and interesting windows.

The villa architecture of the Italian Renaissance is varied and curious, though with a basic flavor of the classic tradition. It seems to reach the ears of contemporary...
American architects with more suggestive eloquence than any other period, but the keynote of Mr. Bottomley's work is a certain peculiar freshness and fertility of ideas. His eclecticism comes naturally from a versatility of taste. He likes to do different kinds of things—a church, a hotel, a country house, a high school, a restaurant, an apartment house—and he finds that each one of these sends him to another with new ideas and a livelier interest. He does not like to specialize. In specializing a man is apt to become a tradition unto himself, and Mr. Bottomley specializes, so to speak, in not so becoming. He does not believe in copying old buildings and slaving after precedent, nor on the other hand in trying to be original as a principal object. One can always find a number of examples of treating a given motive, and it is better to study the old examples in seeking to satisfy oneself how the motive can best be treated. The design should suit the setting. When a certain flavor in a building is derived from and recalls some adjoining object, it tends to make the building an intimate part of its setting. Work of this kind soon draws one away from slavery to any academy or model, into a condition where precedent is not a shackle but a free-hand tool. One ceases to care what the style is called.

And yet, with all Mr. Bottomley's freedom and fertility, the foundation of early training is plainly there, not merely in a preference for classic or Renaissance detail, but in a firm grip on the old principles—that the dominating things should be considered and seen first, the details later; and that one should never use so many different motives that the whole looks complicated—principles upon which Greek tragedies as well as temples were built, and whose statement was formulated by Aristotle.

"The things that I particularly think of in making any design," Mr. Bottomley writes, "are, first, to get an interesting mass to the building, so that the building does not look like a bandbox. One façade cannot make a complete composition without relation to the sides and rear of the building. I work towards interesting silhouettes to the roof lines, contrasting flat surfaces with projecting masses, and contrasting plain walls with interesting detail at salient points. I also try to make as much use of color as is possible, both on the interior and the exterior, not only in the painting but in the use of materials, not only in the strict sense of color, but in the sense of color that the sculptor uses, namely, variation of values as produced by different textures, often of the same material."

This might almost have been written by a Greek!

Decorators often complain that architects as a rule care too little for color, and without doubt, our architecture as well as our (at least masculine) clothing is less colorful than of old. Why did successive generations of New Englanders paint their green blinds a darker and gloomier green? Is it perhaps a timidity which feels surest of good taste when most subdued? If everyone covets the quiet distinction of being clothed and housed in more subdued tones than other people, the result is a progressive elimination of all color. When much color has appeared it has seemed to come from those who cared more for display than for good taste. But if our clothing and our houses—especially our city house fronts—should again become polychrome, under the inspiration, not of vanity or eccentricity or display, but of sheer love of color, and under the guidance of knowledge and good taste—the prospect would be exhilarating. There is more happiness in the "pleasure of the eye" than there is in the "pride of life," and the amount of sub-conscious happiness that a polychrome city might bestow on its inhabitants—as contrasted with a dingy, dark, brown, or drab city—can only be conjectured. The celestial vision of the New Jerusalem was the vision of a polychrome city in whose construction "economy was no object."

And the use of color is another of Mr. Bottomley's distinctions. The restaurant at 5 and 7 East 52nd St. is a very colorful place within and without. The dif-
THE MAYOR'S OFFICE—MUNICIPAL BUILDING, PLAINFIELD, NEW JERSEY.
DETAIL OF LAMP STANDARD—MUNICIPAL BUILDING, PLAINFIELD, NEW JERSEY.
VIEW OF THE NORTHWEST CORNER—
TURTLE BAY GARDENS, NEW YORK CITY.
FOUNTAIN ON THE CENTRAL WALK—TURTLE BAY GARDENS, NEW YORK CITY.
ENTRANCE STEPS—HIGH SCHOOL,
PORT CHESTER, NEW YORK.
MAIN FAÇADE—HIGH SCHOOL,
PORT CHESTER, NEW YORK.
TERMINAL PAVILION WITH INSCRIPTION BY EMERSON—HIGH SCHOOL, PORT CHESTER, N. Y.
ference between this interior and the way such things have commonly been done, seems to point to a difference between patrons who can feel sumptuous if they have enough glitter and heavy ornamentations, and patrons whose taste for the sumptuous contains a demand for proportion and harmony, for a richness that is blended with culture.

The Plainfield City Hall follows to a certain extent the American tradition, and while it is not a strictly colonial building it shows certain influences derived therefrom. It is, however, more vigorous and more powerful. The great limestone columns, pilasters and entablature are really lighter in proportion than the conventional classic orders, but at the same time they are more vigorous and bold than the corresponding order was in this country in the 18th and early 19th centuries, that is to say, prior to the Greek revival. The problem was a very difficult one. It was to take a rectangular mass three stories high and not very long, to work out a practical plan, and at the same time to give a gracious proportion to the building. In order to do this a deep recess was made in the façade to form a vestibule for the four great columns that mark the entrance. The columns were made two full stories high, and an attic of white stone was carried for the entire width of the building across the third story, with a main cornice at the top of the second story, and a minor cornice at the top of the third—a typical 18th century treatment. A very interesting panel, flanked by ornament, bold in relief and rich in moldings, forms a frame to an inscription, and unusual candelabra stand at either side of the entrance door. The central mass of the building, instead of being accentuated by a tower—according to all the traditions of American City Halls—is surmounted by a fine cupola, almost towerlike in its proportions, which is placed directly over the dome of the public committee room on the second story. The proportions of the cupola and the contrasting sizes of the windows of the different stories lead one to observe further that, while a great number of different motives and sizes of windows are employed, they all relate to each other and give a simple effect.

The Port Chester High School is of typical American design under colonial influence, of red brick, white marble, and wood painted white—fine in detail and delicate in scale. The two decorative pavilions, at either end of the façade, express the ends of the rows of classrooms at the sides of the building. The great study hall, extending entirely across the front on the second story, is shown by round-headed windows. The central doorway is interesting with its graceful flight of steps flanked by iron railings and lamps.

St. George's Church, Lake Mohegan—a memorial to Mr. George Lewis Heins, the architect, and Mr. John La Farge, the
DETAIL OF ONE OF THE MOTIFS FLANKING ALTAR—ST. GEORGE'S CHURCH, LAKE MOHEGAN, WESTCHESTER COUNTY, NEW YORK.
VIEW ACROSS TRANSEPT—ST. GEORGE'S CHURCH, LAKE MOHEGAN, WESTCHESTER COUNTY, N. Y.
RESIDENCE OF WOLCOTT G. LANE, ESQ., NEW YORK CITY.
painter—is built of native stone taken from the old stone walls of the place, and laid up in a rubble wall in the manner of the country churches of France. The flavor of the church is a simple French Romanesque, with high square tower, extinguisher roof, and slate laid in concentric diamond patterns. The color is a beautiful warm grey, varied and soft in tone, the slate roof grey green, very heavy and laid in graduated courses, heavy at the bottom, and narrower at the ridges. The ridges are finished with an antique red tile pointed up with grey cement. The flèche or central spire is of green copper with weather vane of St. George and the Dragon. The long lines of the exterior of the building are shaped for contrast with the vertical lines of the tower, the apse and the flèche over the crossing surmounted by the St. George weather vane.

The church within contains, over the altar, a beautifully colored glass window of St. George by Mr. La Farge, and a number of his earlier jewel glass windows, delicately colored. The walls are of grey stone with heavy roof beams of a darker grey. The apse of the sanctuary and the two small flanking niches are gold, and give a beautifully rich tone to the interior by contrast with the grey of the stone walls. The floors are of grey stone of a lighter tone, with four medallions of rich design in black and white marble, Old French rushbottom chairs and kneeling benches take the place of conventional pews. The Stations of the Cross in gold and terra cotta, a number of rich old paintings, the panels by Fra Angelico in tabernacle frames, the red carpet on the sanctuary, and some dark old wood work and carvings, give to the interior its glow of color. The altar has very rich candelabra and tabernacle. The crucifix over the altar is in ivory and is attributed to Benvenuto Cellini. The lighting fixtures, too, are interesting.

The problem in design in the Canoe Place Inn was to reproduce as nearly as possible an old colonial inn—burned down this spring—which was originally built in 1657 and added to at a number of different times. The old inn had a certain charm in mass and proportion which has been preserved. It had to be enlarged from a building containing eighteen bedrooms with a couple of bathrooms, to a hotel with forty rooms and bathrooms adjoining each room. The walls are of tile and stucco, the black slate roof pointed with cement, and the color of the shutters is turquoise blue—rubbed down. The main building has a Dutch colonial roof; the next building is in the manner of an 18th century inn; the third is a typical Long Island farmhouse; and, finally, the pavilion has more of a Georgian classic front, with a plain barn-like roof.

Mr. Bottomley has done a great deal of work in association with other architects distinguished in design, and the Port Chester High School and Southampton High School, the Lane House and St. George's Church were designed while he was a member of the firm of Hewitt & Bottomley. The Plainfield Municipal Building was done in association with Mr. Lawrence F. Peck. Turtle Bay was designed in association with Mr. E. C. Dean.
ROTUNDA—THE ALLEN THEATRE, CLEVELAND, OHIO. C. HOWARD CRANE, ARCHITECT.
The Allen Theatre
C. Howard Crane, Architect

By I. T. Frary

In Cleveland, which has experienced a wave of theatre building during the past few years, the largest and most completely equipped of the amusement houses have been the ones devoted to photo plays and in Playhouse Square, which is the name applied to the newly developed district centering at Euclid Avenue, Huron Road and East Fourteenth Street, the most important in many respects of the recently completed theatres is the Allen, which was designed by C. Howard Crane of Detroit.

Its plans embody a number of unusual features, which make it seem at first sight complex and bewildering. The theatre is located at the rear of the new Bulkley Building and is reached from Euclid Avenue through a long lobby which rises from the street on an easy incline. Owing to unavoidable conditions in the building plan, this lobby enters the theater six feet to the left of the central axis and in order to overcome the unpleasant transition, a rotunda surrounded by an open colonnade has been introduced between lobby and auditorium with most happy results.

The auditorium is unusually long in proportion to its width and the effect of length is increased by the fact that it narrows gradually toward the stage. This tapering of the interior permits of a corresponding increase in width of the alleys at each side of the building which provides room necessary for an adequate discharge from the exits and fire escapes.

A small stage accommodates simple theatrical productions and in front of it is space for a large orchestra. The side walls, from the balcony front to the orchestra, sweep sharply toward the stage, cutting off space that is utilized above the mezzanine level for organ chambers.

From the time one steps up to the ornate bronze and glass ticket kiosk at the entrance, until the attention has been settled on the surroundings of the stage itself, one is impressed by the opulence of the architectural and decorative schemes. The long lobby leading back and up from the street is thoroughly dignified, its mirrored walls, coffered ceilings and delicately wrought lighting fixtures producing an effect of richness that is not overdone. Beyond this is the great rotunda, at one side of which is a tea room and on the other a lounge. Both of these open into the theater proper so that patrons may sit at the tables or rest at ease and at the same time watch the pictures and enjoy the music. The mezzanine floor is pierced by this rotunda and also by a large elliptical well above the rear of the main floor, both of these openings being covered by flat domes whose rich decorations were inspired by the work of the Italian Renaissance. This second dome tends to relieve what would otherwise be an oppressive expanse of ceiling under the vast balcony, and the two break up the mezzanine into a series of curving balconies with delightfully bewildering vistas in every direction. They also exert an important influence on the acoustics, permitting the music from the orchestra to penetrate every corner of the interior.

Above the balcony is still another great, flat elliptical dome, decorated similarly to the one over the well; and the curving ceiling above the body of the house is broken by a large recessed panel around.
BALCONY PLAN
THE ALLEN THEATRE, CLEVELAND, OHIO.
C. Howard Crane, Architect.

MEZZANINE FLOOR PLAN
THE ALLEN THEATRE, CLEVELAND, OHIO.
C. Howard Crane, Architect.
DOME ABOVE BALCONY—THE ALLEN THEATRE, CLEVELAND, OHIO.
C. Howard Crane, Architect.
INTERIOR—THE ALLEN THEATRE, CLEVELAND, OHIO. C. HOWARD CRANE, ARCHITECT.
which are four small ones on its axes. All of these features are ornate in their decorative treatment, a lavish use having been made of both relief and flat painted ornament. If one felt in duty bound to criticise, it would doubtless be on the score of over-elaboration and complexity, yet architecture and decorations are carried out so well in both conception and execution that one feels inclined to forgive the tendency on the part of the designer to let his enthusiasm run away with him at times. The main decorative scheme is carried out in rich, full color, but toned down so as to avoid any suggestion of garishness. It is Raphaelesque in treatment and was studied to a large extent from the Villa Madama, the Vatican Loggie and other work of that period. There is the fertility of invention, the use of scroll work, arabesque and mythological figure subjects, and the breaking of plain surfaces into flat moulded panels that is so characteristic of Italian work. The rotunda is of unusual impressiveness, the subdued walnut and dull gold tones of its great Corinthian order being most effectively relieved by the rich polychrome decorations of the dome and the sparkle of the central chandelier. Any tendency toward heaviness, which might otherwise be felt here, is neutralized by the light ivory tones of the mezzanine, tea room and lounge which are to be seen on every side through the intercolumniations. The rather frivolous valances which break the lower openings are not particularly happy, although they do introduce a needed note of color and soften the abrupt drop to the low ceilings of the rooms beyond.

Excellent opportunity for relaxation is afforded patrons by the tea room and lounge and by the even greater seclusion
WELL—THE ALLEN THEATRE, CLEVELAND, OHIO. C. HOWARD CRANE, ARCHITECT.
of the mezzanine, all of which are fitted with furnishings of an interesting type inspired by Italian models. Here are found the restful tones of ivory and cream, relieved by the solid coloring of the carpet, the brilliant touches in the furniture and the glimpses of the rotunda. The furnishings of lounge, refreshment room and mezzanine, together with their simple wall treatment in ivory tones, supply an intimate domestic touch that goes far toward breaking down the oppressive formality which might otherwise result from the great size and richness of the theatre.

Every provision is made for the use of lighting effects so the place may be flooded or spotted with any tone or intensity of color needed to enhance the screen illusion or stage effects. At either side of the house are triple groups of great windows, rising from balustraded balconies, which are used with telling effect in connection with the lighting schemes, and provide a pleasing relief from the usual array of boxes.

One sees here striking illustration of the many changes that the screen drama has brought about. Instead of the great stage with its complex scenic equipment, the Allen has but a tiny platform suitable only for the simple pageantry and singing with which the pictures are usually interspersed. Instead of a sunken orchestra pit crowded up under the footlights, in order to bring the seating as close as possible to the stage, a great orchestra space is provided here which purposely keeps the audience back from the screen. The boxes, which have always been so important a feature of the theatre, are eliminated entirely, and instead of the closed doors between auditorium and foyer to insure quiet, here is only a low balustrade separating the auditorium from tea room and lounge.

All these features give significant evidence of the changed conditions with which the architect finds himself confronted now that the eye, instead of the ear, dictates the requirements and limitations of playhouse architecture, and in the Allen Theatre are to be found many interesting solutions of the problems which these changed conditions have created.
FIG. 48. PERSPECTIVE STUDY—NO. 230 EAST WALTON PLACE, CHICAGO, ILL. FREGARD E. KNAPP, ARCHITECT.
TENDENCIES IN APARTMENT HOUSE DESIGN

Part V-DEVELOPMENT
of the APARTMENT PLAN

By FRANK CHOUTEAU BROWN

In the last article, published in the September issue, we traced the development of the apartment house plan from the very narrow city lot to the lot of practically square proportions. The plans utilized to illustrate this process were, in their larger manifestations, those of New York examples, that being the city which has thus far furnished us with the greatest number of instances of this class of apartment arrangement.

The same or a similar plan has been utilized in other American cities, it is true, but generally either on a smaller lot or with a more congested plan arrangement. Thus far, it has been principally in New York City that we have found a plan using very large spacious rooms, and having a tendency to spread only one or two apartments over the whole floor of a nearly square lot, located, as a rule, at the corner of two streets. In our other American cities, a lot of land of so large an area would probably be developed with more apartments to the floor and so would generally possess a more involved plan, possibly even attaining the "E" or "U" shape, built partially around a court. This part is not to be adopted, however, with rooms of such large size as are now required in that portion of New York City where such a type of apartment is most in demand.

As a matter of fact, it has not been regarded as part of the purpose of this series to include the Apartment "de Luxe" within its scope,—except insofar as a particular example also serves to illustrate some otherwise important point. The demand for this ultra-expensive structure is still comparatively so slight that, outside of New York, and possibly two other North American cities, is has as yet little general application of interest to our urban communities. In some of the later illustrations, however, and in two of the buildings shown this month, the plan of the apartment building has come almost as near to this class as we need go. Among them, they provide enough examples of the two or three apartment to the floor arrangement, to serve to illustrate sufficiently the characteristics typical of this class. They will also provide the designer, wishing to devise an apartment building of this same scheme to go upon a smaller lot, with the information needed to convince him that he is following sufficiently modern and up-to-date models,—and so ensure that his client is investing his money in a structure competent to retain its position in competition with other similar structures for the length of time necessary to recoup the expenditure.

After completing the illustration of this group, we will turn to a few examples of a plan available to the wide and shallow city lot, and from that departure again advance to the same place to which the growth on the lot of narrow dimensions has already brought us. From that point onward we can undertake to consider the plan of a structure on an area large enough to allow of its extension around a court of sufficiently ample dimensions to make it an esthetic asset as well as a necessary adjunct to the successful treatment of the apartment house plan.

Three of the plans shown in the article last published, all of New York City apartments, were arranged on lots of nearly square proportions. Of these, two, Figs. 41 and 47, were so designed as to place two apartments across the front of the
FIG. 49—NO. 399 PARK AVENUE, CORNER OF 54TH STREET.
NEW YORK CITY. SCHWARTZ & GROSS, ARCHITECTS.

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building, extending out toward the rear along the center line,—and still a third apartment was placed across the width of the lot at the rear. This made the plan outline suggest the letter “T” or “I” in shape.

In the case of the plan in Fig. 47 this likeness was perhaps not so evident, because the lot had there been filled out by the building quite to the right hand margin of the property, which was located on the corner of two principal streets. Both these plans were also worked out to go upon lots that were somewhat narrower than they were deep.

On the other hand, the plan of the apartment shown in Fig. 45 was also located on the corner of two streets, but as the lot was in this case rather wider in proportion to its depth (and the depth was even somewhat shallow at that) this plan would almost come within the category of the group that is broad in its frontage upon the street, or within the classification indicated by the letter “B,” in the arrangement of “key-plans” shown in the diagram published in that issue.

This month we illustrate, in Fig. 50, a plan closely related to the last published group, in several ways. First, the lot being a rectangle a very little wider than it is deep, and again occupying a corner, it has been possible to carry what was in the illustrations in the last article dis-
distinctly a rear apartment with its longer dimension parallel with the front street, out upon the narrower street frontage of the lot, and there arrange its rooms with the length of the apartment occupying most of the frontage on this street, itself the more important of the two on which the building is located.

Accordingly, while the illustration shows a floor plan with three apartments to the floor, the fact is that the plan is really of two buildings, one with its entrance on the right hand street, admitting to the two right hand apartments, while another entrance is provided exclusively for the left hand apartments, — which in itself conforms quite distinctly to the "T" shaped plan that predominated in the last article. The building is nevertheless a single unified structure because, by very ingenious planning, a single rear entrance and service elevator has been made to serve all three apartments; and that, too, with no more serious inconvenience than the necessity of serving to one dining room across an interior bedroom corridor.

A comparison of this plan with the next building to be illustrated is instructive and interesting. In Fig. 51 we have an example of a plan arranged to go upon a lot of almost precisely the same proportions as the last example, and of only slightly smaller dimensions. This building, however, has been intended to take care of but two apartments to the floor, although the service arrangements are, in general, very much the same as in the previous plan.

The service stairs and elevators are located at almost the identical spot that they occupy in the other plan, and each of the two apartments has its own passenger elevator. Although the two main elevators are reached from a common
FIG. 52—NO. 405 PARK AVENUE, NEW YORK CITY. CROSS & CROSS, ARCHITECTS.
FIG. 53. DETAIL OF ENTRANCE—NO. 405 PARK AVENUE, NEW YORK CITY. CROSS & CROSS, ARCHITECTS.
hallway on the entrance floor, these hallways are entirely eliminated on the upper floors, all hallways and corridors being private except a small length (and that unnecessary) near the rear stairs.

This building, as also some other New York examples, possesses no front stairway, one stairs serving all purposes, in addition to the elevators. Of these there are three, but they are all located within ten feet of each other,—along with the single stairway. The consequence is that a possible element of danger in case of fire is introduced, and the plan, as a whole, for this reason would not be acceptable in exactly its present form in certain other cities where “at least two permanent means of egress, accessible directly from each apartment,” is a common requirement of the building law.

The schematic arrangement of this plan is commendably simple and direct. It consists of locating all the principal rooms across the street front of each apartment, placing the principal sleeping rooms down the outsides of the building, but as only one side is upon a street, it is necessary to provide a court for lighting the rear rooms of this tier upon the other side. All the service rooms are grouped around a central court at the rear, the servants sleeping rooms upon the two sides, and the kitchens, each side of the service stairs, upon the end. In both plans the long narrow pantries are also intended to serve the purpose of corridors connecting not only with the dining rooms, but also the kitchen with the front foyer and vestibule, and the front part of the house with the rear staircase as well.

It should also be noticed how exactly this plan divides down the center line into two single apartments, each of the “T” shape, adapted to the medium width city lot. The only change necessary would be to move the stairs and elevators to the center of the single apartment, along the bedroom corridor and just at the rear of the apartment entrance foyer.

The building shown in these illustrations, Figs. 51 to 54 inclusive, built only a few years ago, has not yet been sur-
FIG. 56—NO. 230 EAST WALTON PLACE, CHICAGO, ILL. FREGARD E. KNAPP, ARCHITECT.
FIG. 57. DETAIL OF ENTRANCE—NO. 230 EAST WALTON PLACE, CHICAGO, ILL.  FREGARD E. KNAPP, ARCHITECT.
NO. 58. ENTRANCE HALLWAY—NO. 230 EAST WALTON
PLACE, CHICAGO, ILL. FREGARD E. KNAPP, ARCHITECT

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passed as an example of the best of its type, although it is no longer as "de Luxe" as other more expensive and larger apartments that have since been erected in New York City.

New York has, however, continued the evolution of this class of apartment buildings with perhaps too limited an outlook. All the illustrations thus far shown in this article, as well as those in the latter part of the preceding one, were of a type. They illustrate, within somewhat narrow limits, the incidental advantages or minor defects of their class, and are all so similar as to suggest that they have virtually exhausted the variations possible—or at least desirable—with this kind of plan. That this is so is not entirely the fault of their designers. But in New York practically all of the apartments destined for this class of occupancy, have been built on some one of the four corners available at the street intersections along Park Avenue or Fifth Avenue,—or possibly facing Central Park. The lots have accordingly all been of much the same proportions, and with the exception of the varying exposures (a factor that has been given all too little consideration in most apartment house planning, by the way) the recurring right angles of the gridiron plan have given little excuse for variation in plan arrangement. It is also, of course, the case that once a certain kind of plan has proved its popularity, in our American point of view there is little else to be done than to imitate and repeat it with as near approximation or as little improvement, as is possible; until some minor earthquake occurs to divert attention to another type of plan.

We have, therefore, to go again to the Middle West, and to Chicago, to find a radically different plan type, intended to meet a somewhat similar class of occupancy—and arrangement to fit a different proportion of lot. This plan (Fig. 55), comes within the second principal group, to go on a wide and shallow lot,—although it is true that the lot is not as shallow as some, and is sufficiently developed in depth at the center to conform with the "T" shaped plan, albeit of a much broader and shallower proportion than any we have yet illustrated. Nevertheless, because of its interests of contrasts with the plans we have just studied, and because it is also planned for an expensive class of tenantry, it is shown here.

The scheme that dominates the plan of this apartment, while radically different from the plan last discussed, is quite as simple. The principal rooms and the living essentials are all confined to the central portion of the lot, with the servants’ rooms all contained—with the kitchen—
FIG. 60—"THE RIVER STREET APARTMENTS," BOSTON, MASS. LORING & LELAND, ARCHITECTS.
in an "ell" extended at the rear, in approximately the same location as the service courtyard in the last plan. This gives a central hall space, occupied by service and passenger elevators and stairway (the latter, although located in the space labelled "service hall," being evidently also available for use from the front of the apartments, when necessary). This again groups all agencies communicating with the street in a dangerously small area, immediately adjacent to each other,—but the plan also provides another stairway, in the line of a fire escape, in a different and separated location, connecting with both apartments at the extreme end of the service "ell."

These apartments themselves are also not quite as large as in the last New York building illustrated, each apartment having a total of eleven rooms including the hall,—four principal bedrooms, three servants' bedrooms, a kitchen and dining room and a large living room, whereas the New York plan provided in the smaller apartment three masters' bedrooms, dining room, living room and library, with a kitchen, two maids' rooms and a servants' hall, outside of the foyer, a total of eleven (although quite differently divided, as is seen); and the larger apartment, on the corner of the streets, has a total of thirteen rooms, two additional bedrooms, one of them available either for family or servants.

In the Chicago plan all four bedrooms are grouped around a "chamber hall" in a wing on each side of the central portion of the building, an arrangement the advantages of which have already been noted. Particular attention is also directed to the elimination of all long corridors or passageways in this plan, where it has considerably the better of the New York type with its long corridor leading to the bedrooms. In this connection it might also be indicated that this building has less than 10 per cent. of its floor space given over to public use,—where the average building of this type has generally from 15 per cent. to 25 per cent. of its area thus used. The saving to the owner—both in original cost, as well as in upkeep, heat, light and decoration—should be obvious and considerable, as the tenant pays directly only for the area he immediately occupies. Or, at least, that is the portion of the building that he always sees and compares with other competing apartments,—so that, other things being equal, the owner of an economically planned apartment can at the same rentals make a comfortable income on his building at a price that is barely supporting the expense of conducting a more wastefully planned structure.

Although this building is one of the latest and best of this type of plan that has been built in Chicago, it is not an unusual or peculiar plan arrangement for that vicinity. In fact, the development of an apartment house plan on some of the many narrow blocks, the wide sides of which often come on these cross streets, is rather common in that city. In evidence thereof, and also in further illustration of the possibilities of this kind of plan arrangement, the other plan shown in Fig. 61 will sufficiently show the varied possibilities of the type.

The apartment plan fitted to a wide and shallow lot is in some ways similar to the problem of the plan on a narrow and deep lot, the principal difference residing in the fact that a larger number of rooms obtain street frontage outlook. The latter fact makes at once for a pleasant apartment, capable of renting more easily and at a higher price—a fact that is necessary in order to meet the additional carrying charges on the higher cost of land for a lot of this proportion. Generally, however, a lot of this shape, with its longer front available for street frontage, is found on the corner of a city block,—and the longer frontage is probably upon the less popular or desirable street.

Under these circumstances, it may well be that the entrance from the street should be located on the narrower frontage, so as to number on the more important avenue. The matter of street entrance, however, need not seriously affect the arrangement of the plan upon the other floors, where full advantage of the longer frontage should be taken.

In the case of the corner lot, it is probable that the structure will not only ex-
FIG. 61. TYPICAL FLOOR PLANS—NOS. 6 AND 12 SCOTT STREET, CHICAGO, ILL. WILLIAM ERNEST WALKER, ARCHITECT.
tend down the length of the corner lot—varying probably from eighty to a hundred and fifty feet, but that the plot being developed will also generally consist of two or three lots wide, even in its narrower dimensions, thus attaining a depth of thirty to fifty feet.

Even when this is not the case, however, it is perfectly possible to develop a sixteen to twenty foot lot with success (Fig. 59)—although generally so narrow a lot would require a division into small apartments, probably of two to four rooms.

If the plan is divided into two apartments to the floor on each side of the building's central axis, long corridors will probably easily be avoided, but each apartment will then be of about half the size—unless the duplex idea is adopted, which might be necessary or preferable in order to obtain a large apartment without long corridors on a lot of this proportion and size.

In analyzing the long narrow lot single apartment plan, we find the kitchen and maids' rooms preferably located in the center of its depth. The same approximate location would probably be found desirable under these new conditions,—although the change in the frontage of the plan would make this location now the centre of the width of lot, rather than of its depth. In the case of two apartments to the floor, the location of these portions of the plan would undoubtedly remain the same, whether the plan was developed along the lines of Fig. 55, or Fig. 61.

The plan of the apartment shown in Fig. 59 indicates, in one example, the possible variations of treatment with a lot as shallow as 25'-0" at the end—and as wide as 30'-0" at the other. The three staircases shown, on so small a plan, is one much discussed feature. The kitchenette is here shown in its simple and rudimentary form—a gas stove recessed into the wall of the bathroom.

Fig. 60 shows a compactly planned structure with two apartments to the floor, each of six rooms, intended to go on a lot about one hundred by fifty feet. There is some space left at the rear of the build-
ENTRANCE—RESIDENCE OF BAYARD DOMINICK, ESQ., 115-117 EAST FIFTY-FOURTH STREET, NEW YORK CITY. WILLIAM F. DOMINICK, ARCHITECT.
RESIDENCE OF BAYARD DOMINICK, ESQ., 115-117 EAST FIFTY-FOURTH STREET, NEW YORK CITY. WILLIAM F. DOMINICK, ARCHITECT.
MAIN STAIR—RESIDENCE OF BAYARD DOMINICK, ESQ., 115-117 EAST FIFTY-FOURTH STREET, NEW YORK CITY. WILLIAM F. DOMINICK, ARCHITECT.
DETAIL OF DINING ROOM SCREEN—RESIDENCE OF BAYARD DOMINICK, ESQ., 115-117 EAST FIFTY-FOURTH STREET, NEW YORK CITY. WILLIAM F. DOMINICK, ARCHITECT.
MORNING ROOM—RESIDENCE OF BAYARD DOMINICK, ESQ.,
115-117 EAST 54TH STREET, NEW YORK CITY.
William F. Dominick, Architect.

MORNING ROOM—RESIDENCE OF BAYARD DOMINICK, ESQ.,
115-117 EAST 54TH STREET, NEW YORK CITY.
William F. Dominick, Architect.
TROPHY ROOM—RESIDENCE OF BAYARD DOMINICK, ESQ., 115-117 EAST FIFTY-FOURTH STREET, NEW YORK CITY. WILLIAM F. DOMINICK, ARCHITECT.
TROPHY ROOM (BEYOND DINING ROOM GARDEN)—RESIDENCE OF BAYARD DOMINICK, ESQ., 115-117 EAST 54TH STREET, NEW YORK CITY. WILLIAM F. DOMINICK, ARCHITECT.
STUDY FOR INTERIOR GARDENS—EAST FIFTY-FOURTH STREET, NEW YORK CITY
William F. Dominick, Architect.

FLOOR PLANS—RESIDENCE OF BAYARD DOMINICK, ESQ., 115-117 EAST 54TH STREET, NEW YORK CITY.
William F. Dominick, Architect.
STAIRWAY, INDEPENDENCE HALL, PHILADELPHIA (1750)
The EARLY ARCHITECTURE OF PENNSYLVANIA
PART XI—STAIRWAYS

By A. LAWRENCE KOCHER

The stairway, from the time of the Renaissance onward, has played an important role in the planning of both public buildings and private dwellings. As the artery of communication between one floor level and another, it has generally been considered the key to the majority of plan arrangements and the subject for most profound study and dignity of treatment. The importance of the feature was voiced by Palladio, who said, "in placing of staircases, the utmost care ought to be taken; it being a difficulty to find a place convenient for them that will not at the same time prejudice the rest of the building." Perhaps Palladio sounded this warning because the architects of his day were beginning to realize the mistakes of their predecessors. The Italian architects of the late Renaissance were the first to break away from the stairway between walls, as in the Riccardi, Strozzi and Massimi Palazzi, and to create the open stairway of large size and ambitious decorative treatment.

To the French has usually been credited the most successful handling of the feature in plan. The grand and spiral staircases of the palaces and royal country seats of France continued if they did not outdo the fundamental traditions established in Italy. The "escalier à la Française" was a practical solution of the motive on a smaller scale and one that was destined to influence the design in the British Isles.

The contribution of the English in the design of stairs consisted chiefly of examples in domestic dwellings in Tudor and more particularly in late Renaissance times.

The conception of the staircase in America of the eighteenth century was solely of English inspiration and its development in the colonies was a continuation of British precedent, modified slightly by the limitations of the prevailing wood construction but revitalized with singular energy by the ingenuity of local craftsmen.

It is important at the outset to understand clearly what is meant by the term "staircase." This will enable us to better interpret the position of the stairway in the early American house and particularly in Pennsylvania. The staircase in both England and America in the eighteenth century, was understood to be a feature that was separate and distinct from the hall. Gwilt in his Encyclopedia of Architecture designates the staircase as "that part or subdivision of a building containing the stairs which enables people to ascend or descend from one floor to another." The hall is defined as: "The first large apartment on entering a house." That this understanding of the province of the stairs as distinct from the hall was adhered to in America, is made clear by an examination of the plans of the more important dwellings in Pennsylvania. At Mount Pleasant Mansion the imposing central hallway is separate from the staircase. The latter is situated in a separate compartment, being at the left of the hall as you enter and also shut off from it by an architectural treatment consisting of a heavy classical beam, upheld by square fluted piers. At Hope Lodge the staircase is to the left of the further end of the hall and is completely hidden from the entry way. The feature in the Morris House
WEIGHT HOUSE, COLUMBIA, PA
MACLAY MANSION
HARRISBURG, 1790
BOGGS H.S., GREENCastle
E. BLAINE HOUSE
CARLISLE, 1794
E. CROUCH HOUSE
HIGHSPIRE
HESS HOUSE
BOALSBURG
DR. JOSEPH PRIESTLEY
H.S.
NORTHUMBERLAND
HOUSE
COR. PRINCE
& W. ORANGE
LANCASTER
"OLD MILL
HOUSE"
LANCASTER
1767
HOUSE IN
PHILADELPHIA
SPIRAL
STAIRCASE
BENNER H.S.
ROCK FORGE
PA
1812
LANDING
STAIR-END DESIGNS
IN PENNSYLVANIA
MEASURED & DRAWN BY
A. L. KOCHER
in Germantown is similarly situated but at the center of the right side. Again at Cliveden the staircase occupies a confined space at the rear which is partially screened from the spacious hallway by means of a colonnade. This practice of separating these two parts of the house occurs so frequently as to establish a custom.

Even in instances where the stairway is at the rear of a central hall, as in many farmhouses and lesser dwellings, an attempt was generally made to differentiate between the two parts by means of a separating colonnade or arch, with the result that the entrance hall is visibly apart, if not shut off, from the stairway.

The vestibule, which occasionally occurs in the early houses of New England, was never a part of the Pennsylvania dwelling. The more rigorous climate of the North no doubt imposed the necessity of the addition in that locality; although Great Britain offers no precedent for the feature. Our own present day practice of using a vestibule finds some justification in that there is a need for privacy with our stairs most often placed, with frank unconcealment, in the main hallway.

The staircase in this colony was varied in form. The types that were most commonly used may be reduced to three. The first was termed "the dog-leg'd stairs" and it consisted of a flight of steps to a "half pace" or landing from whence a second flight attained the floor above. The second type was known as an "open newelled stairs," composed of a small flight to a square landing from which a second flight continued upward at a right angle to a second landing and finally the third flight attained the floor above in a direction that is the reverse of that at the beginning of the ascent. These two stair motives are illustrated in the drawing on page 402.

The third familiar form was the circular or elliptical staircase.

The continuous rise of steps from floor to floor was not used, except in rare instances, in narrow and deep city dwellings, and so need not be admitted to our classification. We may also omit the consideration of the service stairs which
Example of “Open Newelled Stairs.”

STAIRWAY OF THE C. G. DONNEL HOUSE, SUNBURY (1780).

STAIRWAY IN KEEPER’S HOUSE, CHARMING FORGE.
when used occurred in a confined and winding space in the thickness of walls at the side or rear.

The staircase of Mount Pleasant Mansion is an instance of the first type. Our illustration presents a view that was taken from a position in the main hall, just within the front entrance door. This shows effectively the detached character of the stair hall. The spaciousness of the two halls, which occupy a third of the floor level, indicates the high standards of comfort that prevailed in the life of the colony. The newel posts are here noticeably suppressed. The handrail begins as a spiral or volute at the foot of the stairs and continues upward to the second floor.

A more modest stairway of the same form is in the Donnel House in Sunbury where the unusual rail, without balusters, bespeaks the simplicity of frontier isolation.

The second or "opened newelled stairs" is represented by the refined stairway of the Maclay Mansion in Harrisburg. The turned newel posts occur at the angles and at the beginning of the flight, to add an effect of structural solidity. At the top of each flight the walnut handrail is ramped; that is, there is a downward curve which eases the transition from the horizontal to the slope of the stairs. The spiral termination of the stairway at Charming Forge is a decided improvement over the turned post. There is something satisfying and hospitable about the wider lower step, and the graceful curve of the unfolding balustrade is quite appealing.

The circular or elliptical staircase was never very popular in the central colony. Its rarity may be due to the fact that a circular compartment necessary for the spiral stairs did not fit into the rectangular plan without a resulting loss of space. It also required a greater skill both in planning and in construction to contrive a staircase in one continuous sweep from floor to floor—a degree of skill or at least a turn of ingenuity that our craftsmen seldom attained. Later in the eighteenth century, when the influence of the Adam brothers gained a foothold and when circular and oval shaped rooms were an essential feature of the new mode in the setting out of the plan, the sweeping curve from floor to floor was not only logical but also of fairly frequent occurrence. An example of this spiral stairway is in the Benner House, built near Bellefonte in 1812. The stairs of the Beltzhoover House in Carlisle, while not of the true circular form, does involve a half circle in reversing the direction of the steps in rising from one floor to another.

There were rules to be observed in the laying out of this form of stairway which were set forth in The British Carpenter, published by Francis Price in Dublin in 1768. The suggestions made by Price are quoted because of their reasonableness and because the observance of his rules might well be followed by builders of similar stairways today.

"Circular stairs are used . . . chiefly
DETAIL OF STAIR BALUSTRADE, GOWEN HOUSE, MOUNT AIRY.

STAIRWAY AT WHITBY HALL, PHILADELPHIA (1754).

DETAIL OF STAIR BALUSTRADE, UPSALA, GERMANTOWN (1798)

STAIRWAY OF THE JOHN WRIGHT HOUSE, COLUMBIA (1726)
for conveniency of going up in a little room; they admit of being better lighted from above, in case they are placed in the middle of a building; and in their formation should have this strict observation, viz., to be equal in their tread or breadth to the other steps at a distance of two feet from the middle of the rail, or nearly so: The reason is, in going up or down, your hand is generally on the rail (which is made for that purpose), so that betwixt both your feet, will generally be this distance of two foot, as was before observed, so that the stairs are thereby rendered easy; the feet feeling no difference, for what is contracted on one side, is seldom trod on, and very seldom on that part that is extended, unless two persons go up or down together, or pass each other."

It also should be noted that it is best to use what is termed "the sinistral spiral," that is, circling upward to the left, for with this arrangement the handrail—most essential in descending the stairs—will then be at the right hand.

The baluster was a subject on which the craftsman exercised his power of invention. He seems to have studiously avoided duplication, so that this detail shows a surprisingly wide variety of shapes. The baluster sometimes assumed the outline of an attenuated Doric capital, or it was composed of a combination of bosses, blocks and vases. An example of great beauty appears in the Wright House (1726) in Columbia, Pennsylvania. The balusters are of walnut. The robust turning is well modulated and somewhat foreign in aspect.

In contrast with these are the slender spindles of the Gowen House, Mount Airy. Perhaps a difference in date accounts for the lightening of the balusters. Certainly the square form was always slender, the dimensions of the sides being sometimes so light as three-quarters of an inch. A width of an inch and one-eighth was most frequent. The square baluster was sometimes beaded at the angles, and the outer and inner faces were sometimes concave, combined with the beaded corners as at Upsala Mansion.

The stair ends are of interest for their
STAIRWAY DETAIL
BELTZ-HOOVER HOUSE
BUILT BY STEPHEN DUNCAN EARLY 19th C.

MEASURED DRAWINGS, SHOWING BELTZ-HOOVER HOUSE STAIRWAY AND STAIR-ENDS.

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fanciful elaboration of detail, consisting of every conceivable variation of the bracket. The instinctive abhorrence of monotony again prompted the American stair-builder to translate this utilitarian feature into an endless variety of cut out and carved forms which very well expresses the vigor of the local style.

The stairways of public buildings, in the main, followed the conceptions that we have observed in private dwellings with the difference that the arrangement was made to accord with the particular character of the structure where it was placed. In the public building the stair construction and its design was more sturdy, there was less of the domestic in the decorative parts and an increased amplitude in the breadth of steps and landings.

The stairs of Independence Hall (1750) are of the finest and represent the nearest approach to the monumental stairway in America in colonial days. They are, first of all, appropriate to their setting within the great square tower, and the main axis of the building on this, the most important floor, is not obstructed. They are distinguished by a proper vigor, refinement and grace, and they do not in any measure suffer by comparison with the Georgian prototypes of the mother country.

The bracketed ends of the steps are here carved with skilfully handled acanthus ornament in bold relief. The balusters are slightly enriched, while the string course at the face of the stair balcony displays a carved band consisting of the acanthus combined with the Vitruvian wave ornamentation. The double stairway of the Pennsylvania Hospital in Philadelphia is considerably lighter in scale and possesses an effective grace and air of comfort and combines well with the columnar hallway.

In our review of the staircase in Pennsylvania we should not lose sight of the broad organic growth of the style with all its component parts and various attributes. It must not be appraised as a growth of a detached feature or of details alone. It was, indeed, the visible manifestation of a broad art tradition that made vivid the high intelligence of the new world. Good taste and sane judgment have always been more potent than material wealth alone. Thomas Jefferson once said: "To give buildings symmetry and taste would not increase their cost, it would only change the arrangement of the materials, form and combination of members. This would cost less than the burden of ornament with which these public buildings are often charged." The truth of this dictum consists in the fact that architecture is no mere affair of details. Its success consists of an unfailing sense of appropriateness and an artistic unity consistent with strength, from which no part can be altered or removed without an evident loss in appearance. To anyone who has made a careful study of early American architecture, it must be evident that adornment was of subordinate interest; that practical aims prevailed over surface adornment. Otherwise the results would have been self conscious, petty and insincere.
HAVING discussed the question of training for the practice of architecture* and endeavored to show that such training cannot, in the nature of things, be given in a university, or in a professional school working on university lines, I would now attempt to give a general outline of what I conceive a proper university course in architecture should be. For the study of architecture is no less important in liberal education than that of any other of the humanities, since it is the study of man in the exercise of some of his highest faculties, and the proper aim of academic instruction in this subject is, therefore, to introduce students to a knowledge of the part that architecture, as a mode of intellectual and emotional expression, has played in human history.

Architecture is not merely an important branch of what we call the fine arts, it is the root of them. For all graphic and plastic arts depend for their primal qualities on principles that are fundamentally architectural. It is often said that the fine arts are essentially one; but how they are so is seldom made clear. They are one because they are all based on the same principle of organic coordination of parts with a view to beauty. They differ among themselves only from differences of purpose, of materials, and of consequent technical treatment. Every true design, whether in building, in sculpture, or in painting, has an arrangement of lines, spaces, or solid forms, that are proportioned and adjusted so as to produce an harmonious whole; thus the architectural principle of structure governed by the sense of beauty, is common to them all.

Since the proper aim of liberal instruction in architecture is to awaken apprehension of its significance in the history of human thought and feeling, it must embrace a wide field, in order that the various characteristics and affiliations of the monuments through the ages may be noted and compared, and their respective qualities appreciated.

The materials for study are, of course, primarily the monuments themselves; but as first hand examination of the actual monuments is impossible in academic courses, resort must be had to such second-hand sources of information as are reliable and obtainable. The discerning student will soon find that books and graphic representations are rarely altogether trustworthy, even so far as they go; and that they never give full information. That they are seldom to be trusted will appear from the fact that in treating the same subjects, different books do not wholly agree with one another, even in matters of plain description of facts; and their incompleteness will be painfully realized when one seeks full knowledge of any structural system. That correct and complete information cannot be gathered from books, the student should be made early to understand, in order that he may not waste time and encumber his mind with misunderstanding. It is no exaggeration to say that the greater part of the large and costly volumes in architectural libraries are, to a deplorable extent, of little worth, from defect of faithful observation and description of the monuments of which

* Architectural Record, January, 1921.
they treat.* Therefore the student should be cautious in the use of books, and regard nothing in them as dependable without verification. He cannot too soon begin to form a habit of critical discrimination in the use of so-called authorities.

Happily, we have in photography a source of information that is entirely reliable as far as it goes, and the first need in equipment, as to materials for study in academic courses in architecture, is a practically unlimited collection of large scale photographs. These will supply all in the way of first-hand information that such courses need. Photographs afford, indeed, some advantages that the monuments themselves do not afford; for the monuments are widely scattered, and cannot be directly compared, while the photographs may readily be brought together on a table. Thus through photography the comparative study of architecture is become for the first time possible with convenience and fulness. Further on we may briefly consider what a working collection of photographs should be, and how such a collection may be most conveniently arranged, stored, and catalogued for use. Meantime I may suggest shortly the lines on which liberal courses in architecture may properly proceed.

Architecture being primarily an art of construction, the leading principles of construction call for the student's first attention. He should be taught to see that while the countless varieties of so-called styles may appear of bewildering complexity in their superficial aspects, they nevertheless, in fundamental structural character, fall into but three categories, namely, (1) that in which the simple principle of upright support and horizontal load is embodied—as in the Greek temple—where the load exerts no force save that of crushing weight; (2) that in which the load is an arch exerting thrusts which are met by buttressing with inert masses of masonry; and (3) that in which the arch is shaped and adjusted so as to reduce thrusts, as well as to meet other needs, while the upright sup-

ports and buttresses make up an organic skeleton in which stability is maintained by equilibrium of active forces. It will be found, however, that the arched types of building are broadly divided into those which are covered with timber roofs only, and those which are vaulted; but it is important to notice that among the vaulted buildings the full development of arched construction is worked out only where the organic skeleton constitutes the whole supporting fabric, as in Amiens cathedral.

That in one or another of these three primal types, the essential structural character of any given building resides, is a fact that should be clearly grasped, and held in mind as a guiding principle in architectural study. From want of recognition of this fact, great confusion has prevailed in the classification of historic styles, with consequent fundamental misunderstandings. For the structural nature of a building may be superficially disguised, so that its general aspect will be inconsistent with its real character; and this has been done in manifold different ways through the ages. The attentive student will find that extensive misuse of structural members has been made in various localities at nearly all times of architectural design. Members originally formed and combined with propriety for structural functions, have been imitated and employed without structural purpose, but merely as would-be ornament independent of structure. And thus employed they have been variously denaturalized and capriciously readjusted, from imperial Roman times down to our own day. Therefore in the study of architecture, a habit of critical discrimination in respect to construction cannot be formed too early. And to this end all instruction should be accompanied by demonstrations from the monuments, by means of photographs and trustworthy diagrams of construction.

The student has next to note how structural members and adjustments, in the hands of craftsmen who work with a natural sense of beauty disciplined by experience of the best, are shaped, proportioned, and combined, from least to

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greatest, so as to produce an harmonious whole in which the utilities of building become grateful to the eye. The manifestation of this disciplined sense of beauty, controlling all that the workman does, is, I conceive, what differentiates architecture from mere building.* Mere building may, indeed, have a kind of beauty from natural adaptation to use; but this is not what we understand by the beauty of architecture—which involves the idea of purposed expression of beauty transcending that of mere utility.

Coming now to architectural enrichments—as the profilings of mouldings and sculpture, whether of the human and animal figure, or of vegetation—a vast field for study opens. The student should note well the character of ancient profilings, more particularly the Greek, and observe the proportions, combinations, and qualities of curvature of their parts, and how the curved members are foiled by fillets. He will find that these profilings are among the features that chiefly determine the relative merits of schools. In mediaeval works he should notice how the ancient forms, with countless variations, survive through all the transformations of Romanesque and Gothic art, and note what new and subtle beauties were wrought in them by the genius of the Middle Ages.

In treatment of the human and animal figure, it should be noticed how far it is governed by tradition and limited in representation by conditions of material, of craftmanship, and of architectural effectiveness; and how archaic works, however uncouth, may exhibit qualities of composition that are often wanting in more technically advanced art. In the supreme art of Greece—that of the Phidian age—will be found every quality of human and animal figure sculpture developed to the highest degree possible within the limits of the natural conventions of stonework and of monumental purpose. The essentials of form are rendered with consummate truth, and thus appear instinct with life; but the student should see that no trivial naturalism occurs, and a quality of breadth and an expression of repose prevail. It should be particularly noticed that in the finest Greek art, as that of the Parthenon, no violent action appears. There may be swift movement, as in the horses of the frieze, but it does not overstep the bounds of moderation; and it should be noted that the first signs of decline in Greek sculpture appear in resort to violent movement, contorted postures, and exaggerated anatomical development. A comparison of the sculptures of the Parthenon with those of the Pergamene altar-frieze will be enough to show this. The student should observe, too, that the Phidian representations of animals are, in combined truthfulness of expression and lithic convention, the most admirable ever produced. Equine nature has never elsewhere been given in sculpture with such consummate perfection. The student should notice also, that in Greek architecture, sculpture occurs, for the most part, only as an adornment of surfaces—either of the sheltered spaces of the pediments, where it is in the full round, or on long friezes, where it is in low relief—and this he will find is commonly the case in ancient art. It remained for the craftsmen of the middle ages to produce forms of architecture in which sculpture assumes a closer relationship to structure, and thereby develops a new character.

In the study of mediaeval sculpture, the student should note the persistence of ancient tradition through all the manifestations of the new spirit by which the art was being so remarkably transformed. He will find that in the earliest Gothic statuary, the general treatment of form and the character of details, as tresses of hair and folds of drapery, strikingly reproduce those of archaic Greek art—as a comparison of the figures of Delos and those of the western portals of Chartres will show; and he will find further that Gothic sculpture develops out of its archaic character by successive steps that closely correspond to those through which that of classic antiquity develops, though it does so on lines that are distinctly mediaeval. He will see that as to form, the

*While the etymology of the word architecture may not sanction this distinction, the distinction is a real one, and common usage—which has grown out of a recognized need—has virtually accepted it.
statuary of the middle ages is less perfect than that of ancient Greece, partly on account of the stricter architectural sub-ordination which the Gothic ideal demands, and partly in consequence of conventions arising from the use of coarser materials—which, for the most part, preclude approach to the Greek kind of perfection. Nevertheless, such was the skill of the Gothic carver, and the quality of the best stone afforded by the French quarries, that in many instances Gothic sculpture will bear comparison, as to form and workmanship, with the finest Greek art;* while in spiritual expression and in architectural value, it is supreme.

Coming to the carving of ornament derived from natural vegetation, the student should observe that the architecture of the middle ages, in northern Europe, displays a character before unknown; but yet that, equally with the statuary, the influence of ancient tradition is strongly marked. The old schemes of composition persist in the multitudinous varieties of scrolls, meanders, and geometrical figures, within which the details of foliation are enclosed, or on which they are arranged. Thus an historic continuity runs through the art of the past, while yet it will be seen that certain peculiarities distinguish the art of one locality, and one epoch, from that of any other. These marks of difference in artistic temperament and culture will call for constant discrimination. It will be found that the mediaeval genius not only rang many changes on the historic elements, but that it often transformed them almost past recognition without destroying the basis of traditional composition.

Discrimination is of particular importance in respect to the changes that take place in an art as it advances and as it declines. The remark of Guizot, that great movements in human history begin with the good that is in them,† is as true of art as of other things. It will be found that the beginnings of every great art show an integrity of purpose in advance of ability to develop forms. As the art progresses the uncouthness of primitive workmanship gives place to better execution until complete mastery of hand is attained. Then come those remarkable perfections that distinguish the finest art. But it behooves the student to observe that no great school has ever maintained its pristine integrity for very long. Redundance and extravagance, accompanied by loss of vitality, soon overtake it. This is clearly shown in the foliate carving of all European schools, but more particularly in the French Gothic. In the foliation of this school, the degree in which the vital spirit of nature is made manifest, through the proper conventions of stonemasonry, gives the measure of the integrity of the art. This spirit in nature is most fully marked in the early stages of growth, as in the budding and early development of vegetation. In the finest Greek foliation, such as the acanthus leafage of the Epidaurus capitals, it is finely manifest. In the later Greek art it is less apparent, and in Greco-Roman foliation it disappears under exaggerated flexures of line and surface without nerve. In the early Gothic leafage this living principle finds expression under a marvelous variety of new and beautiful forms; and it is worthy of particular notice that in the earlier Gothic art the germinating forms of springtime give the ornamental motives, while in the more advanced period the spring leafage gives place to the developed forms of summer, and again, in the later art, the dried leafage of autumn appears; and still further, in the last stages of Gothic art foliation, becomes shrivelled and lifeless, as in the so-called Flamboyant style. This is no fanciful notion. It is a fact that may be readily verified.

As for painting, mosaic, and stained glass, as modes of architectural embellishment, the student should be taught to see that each of them, when practised normally, exhibits conventions that are inherent in the materials and processes employed; and that, apart from the artistic capacity of the craftsman, the qualities of each depend on the strictness with which its natural limitations are observed. The essential purpose in each case is to

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* Cf. my Development and Character of Gothic Architecture, pp. 374, 375.
illuminate the walls or openings with color that shall in itself be pleasing to the eye. From an architectural point of view nothing more need be considered; though the work may have the further purpose of pictorial interest in so far as this is compatible with the conventions of the process involved. The principles and processes of each of these modes of color embellishment should be explained, in order that the student may perceive their proper limitations. He should see, for instance, that when the mosaic worker seeks to obtain pictorial qualities that belong to painting he disregards the natural conventions of mosaic, and destroys its ornamental value, while he necessarily fails to reach the proper qualities of painting; and that in stained glass any attempt to produce pictorial effects is still more disastrous and futile.

As for painting proper as wall decoration, it should be seen, from the monuments, that some mistaken notions concerning its conventions have prevailed in modern times.* These cannot, however, be discussed here any further than to say that such painting—in common with all kinds of color embellishment—has value architecturally only in proportion to its ornamental effectiveness; and its conventions are properly determined by this alone, save as they are inherent in the materials and processes of fresco or other medium employed. In architectural wall painting, the student will find that naturalism in representation may or may not exist—since the ornamental value of it depends on its quality as illumination only.

The foregoing suggestions will, I think, be enough to show the lines on which academic instruction in architecture may be usefully conducted. Many more things will occur to every competent instructor, and no two instructors will teach in precisely the same way in this any more than in other subjects. The instructor ought to have some solid first-hand knowledge of architecture, in addition to a native inclination to the subject; and his success in teaching will be in proportion to his faculty of quickening observation by close study of the monuments. To this end he must have adequate equipment in trustworthy materials; and the only entirely trustworthy materials—apart from direct access to the monuments—being photographs, a suitable collection of these is indispensable. They should be of fairly large size, and from clear untouched negatives.* For each monument to be examined, a considerable number of photographs will be required in order to show, as far as may be, its complete form and structure both internal and external, as well as its ornamental details.

The proper classification, cataloguing, and storage of a working collection of photographs present some difficulties that cannot be wholly overcome. The most convenient method is, I think, to classify first by periods—as ancient, mediaeval, and modern; then by countries, and then by particular localities. Thus the Parthenon, for example, would be found in the ancient group under Greek architecture of Athens. But as many architectural monuments of the past have been altered, or added to, at different times, so that parts of them as they now stand may be of several different periods, and so in several different styles, they cannot be wholly assigned to any one period. In such cases—which include the majority of ancient and mediaeval buildings—it is well to group them according to the periods to which their greater parts belong, with cross references to the periods in which their other parts fall. Thus all illustrations of the style of any given period which the collection affords may be readily brought together.

The collection will need to be classified further under the different kinds of work represented—as architecture, sculpture, and painting, and where several kinds occur in the same building, cross references will again be needed. Sculpture and painting not associated with architecture may be grouped according to periods, countries, and particular localities, and

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* What is called "artistic photography" is unsuitable. For architectural study a photograph is useless in proportion as it has suffered from retouching.
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again under the names of masters, where these are known. Under painting it will be convenient to include both mosaics and stained glass. It is not well to classify paintings by galleries, because only a few works by a given master are to be found in any one gallery; and there may be important works by him not in any gallery. But when grouped by masters, all photographs in the collection representing works by a given master may be found in one place. Where names of masters are not known, the photographs may be classified by schools in so far as these can be determined.

Any possible classification will present difficulties, but no serious inconvenience need arise in the system here described, if it be understood that nothing is affirmed conclusively as to periods, authorships or anything else. Many things are doubtful in these matters, and whatever system be adopted will be only for convenience in administration. There is difficulty in grouping things even under periods, not only because these may in some cases be doubtful, but also because definite limits cannot be set to the beginning or the ending of any period. As a working principle, however, limits must be fixed, and it may be assumed for convenience that the period of ancient art ends with the fifth century, that of the middle ages with the fifteenth, that of the Renaissance with the century following, after which everything may be called modern. As for storage and ready access, particularly for a large collection, no boxes or portfolios should be used. These occupy much space, and involve useless trouble and expenditure of time. The most convenient and the most compact method of storing photographs for use is in cases with upright compartments which may be in several tiers, in which the photographs, mounted on stiff boards, may stand upright, like books on a bookshelf. The mounts should be of uniform size, with only one photograph on each mount. The size of the mount will be given by the larger photographs, of which it is desirable that the collection should mainly consist; and for these, the margins need only be wide enough to allow space at the top on which to write the catalogue and shelf numbers. The compartments ought not to be more than eight or ten inches wide, for otherwise the mounts will tend to sag when the compartments are not full. If they get bent they will be inconvenient to use. The catalogue numbers should be written near the front edges of the mounts, so that they may be easily run over in order to find what is wanted. If the cases be provided with dust-proof doors, the photographs will be better preserved.*

Of other desirable materials for study, the most important are, of course, original works by great masters in painting and sculpture; but these are both costly and difficult to obtain. Of the great historic schools of painting, no adequate materials for first-hand study can be found in America; though the growing public collections of the country already include some important works. For the study of sculpture, plaster casts may be useful, and are easily obtainable at little cost. But I think, as a rule, that photographs are better. Plaster casts are ugly things, and take up much room so that few of them can be housed. Photographs show more of the character of the originals, may be had in unlimited quantities, and if several views of each work be had, they will afford all that is required for academic study.

It should be added that in the study of architecture, as of the Fine Arts in general, some practice of drawing is desirable as an aid to apprehension and as a means of record and description. No study of the Fine Arts can be very fruitful without the kind of culture that comes through some training of the eye and hand. It is important, therefore, that courses in drawing should be maintained. Simple delineation and water color wash will give all that is required; but the exercises must be rigorous and sustained.

* This method of classification and storage was adopted in the Fogg Museum of Harvard University, where the collection of photographs was begun about thirty years ago, and was, I believe, the first of its kind. This collection comprised, when I last saw it in 1906, upwards of fifty thousand photographs.
The architect who has built a room in any strictly period style can safely entrust it to a decorator without fear that his plan will be betrayed. For the decoration of a period room requires only expertness and there are plenty of references to supply the necessary information. But the fashion for period houses has reached its zenith and is now on the decline. In place of rooms that attempt to be only consistent reproductions of the taste of sixteenth century Italians or of seventeenth century Englishmen the discriminating person now wants rooms that profit by the architectural genius of the past but sustain their own individuality without being limited to any one historical type. The architect who has built such a room may well tremble for his design. For it will have to be furnished by a coherent collection of pieces from different origins and dates composed into a consistent whole by their community of spirit, and the selection of such a group of pieces demands of the decorator a sensitiveness to the particular quality of styles which comes only from native taste reinforced by a profound understanding of the spirit of different periods. Without such a sympathetic feeling for the character of different styles the decorator will never be able to blend his furnishings into a coherent whole, and, above all, will never be able to interpret by means of his decoration the intent of the architect.

While there are a number of decorators who can succeed in the choice of furniture for such a room because of their knowledge of this branch of the decorative arts, there are almost no decorators who are consistently successful in the selection and use of tapestries. The feeling seems too often to be that where a textile is needed it must conform to the room only in size and color. There is almost no respect shown for tapestry as a highly evolved kind of design that has a definite character in every school and a specific personality in every piece that can be ranked as art. That character and that individuality must be regarded in any room whose coherence depends on maintaining a certain feeling quality.

In fact, a tapestry which has any strength of design at all probably impresses itself on the character of a room more insistently than any other object in the room. Its very size makes it a relatively important factor in creating the spirit of the room and its claim on the attention is reinforced by the sharp contrast of its texture with all of the other textures in the room. An incongruous tapestry in an otherwise perfectly assembled room will disorganize the entire composition and shatter the unity of feeling in the decorations. And certainly the tapestry is of major importance in sustaining the architect's design, for tapestry is essentially an architectural decoration, almost as intimate a part of the structure of the room as the mouldings and panels. The architect who has concern for the outcome of his plan will do well to insist on an intelligent and sympathetic choice of tapestries.

In proportion as a tapestry is great as a work of art its character will, of course, be definite and dominating. So the greatest of all tapestries, the Gothic, must be used with the most delicate care for the feeling which they convey. Theirs is, moreover, a difficult feeling to sustain in a modern house, so difficult that perhaps success in their use can be assured only when the tapestry is given priority and allowed to dictate the scheme of the rest of the room. Yet most decorators are willing to add a
Gothic tapestry as an incidental afterthought to any room that has a general antique atmosphere.

The spirit of the Gothic is severe even in its gayest, most frivolous expressions. The Gothic is democratic, but it has a democracy that is achieved, not by indiscriminate inclusion, but rather by lifting every aspect of life up to rigorous aristocratic standards. So it is always dignified, haughty also; even when it is obscene, and by modern standards it not infrequently is obscene, it maintains an aloof quiet which shields it from any taint of vulgarity. It may be gay, ribald almost, and never violate its restraint.

Yet, notwithstanding this severe hauteur, the Gothic spirit is childlike and sweet. Its restraint is the reserve of native good breeding and is so inherent it is quite unconscious. Being unselfconscious it has none of the acrid antagonism that belies the hauteur of the parvenu. It is genuine and direct and perfectly honest, but it is never familiar. Only a rare American room can rise to the demand which the spirit of the Gothic imposes, and no room can fulfill its demands that does not take them carefully into account.

For the gentle but decisive formality of the Gothic, the Renaissance substitutes a much freer, really boisterous spirit. Restraint gives way to opulence, and reserve is melted in a flood of sunshine, yellows and brilliant reds. The rigorous, noble vertical lines of the Gothic are abandoned and in their stead is the abounding vitality of full curves and flowing movement. The Renaissance was aristocratic, but it was the aristocracy of wealth and power that it best expressed, force and abundance and pagan good health. There are no bounds to the Renaissance spirit. It dares anything because it never stops to question its own capacities.

The sumptuous confidence of the Renaissance weakens out to coarseness in many, if not most, of the pieces that have come down to us from the late sixteenth and early seventeenth centuries; but even the poorest of these pieces keep still the feeling of abounding good spirits, festivity and energy. To this predominant feeling of power and surety any room in which a Renaissance tapestry is used must be adjusted. Particularly the later, weaker pieces demand that the room live up to their spirit and so re-enforce it, else they will seem only distended and empty and exaggerated.

The tapestry of the seventeenth century takes on a heavier tone. The characteristic designs of the pre-Gobelin and early Gobelin looms, with their strong, heavily modelled figures, their massive architectural sets, their dramatic placing and gesture are adapted rather to institutions than to the usual home. This was the age when the great impersonal institutions were developing. The state of the Middle Ages was intensely personal, built on the feudal relations of man to man, and the most characteristic institution of the Gothic period, the Church, was the elaborate glorification of two persons, Christ and the Virgin, with innumerable other persons about them, the long calendar of Saints. In the period of the Renaissance the domination of institutions gave way to a strong individualism that elevated the powerful to positions of pre-eminence but kept each man of first importance in his own eyes. The seventeenth century again reestablished institutions, but this time institutions built, not on personal relations, but powerful and independent in their own right. So we have the rapid development of the national State in France and in England, and so, too, we have the amazingly strong growth of capitalism in the economic world. This impersonality of strong institutions the tapestry of the period reflects, making it totally unfit for any room that strives for intimacy or quiet reserve.

There is, however, one familiar type of seventeenth century tapestry that has a more general utility, the Teniers verdure. These rich blue-green woods with their squat peasant figures are a satisfactory background for a wide range of decorative effects. Endowed with little character of their own, they do good service in providing a pleasant texture and color that is comfortable, but neither restrained nor boisterous nor grandiloquent. They are the great middle class of tapestry, not very decisive or interesting but sure and solid and convenient, and almost depressingly numerous.

The busy and skilful French looms of the eighteenth century have left but few contributions that are useful in a room which is not purely period in design. The delicacy of their tone and the frivolity of many of their subjects adapts them to an extravagant boudoir, but beyond that they almost always demand girt furniture or elaborate and delicate marquetry. Outside of their own highly artificial atmosphere they are faint and ineffective.

A tapestry is not merely a cloth to cover conveniently a barren wall. It is a work of art, with a character of its own, that must
be respected; and if it is not respected, it will intrude itself and do violence to the character of the rest of the room. This the decorator must understand if he is attempting to do rooms of individuality. He must understand the spirit of each period and he must respect, too, the demands of the subject. What folly to put a Crucifixion in a living-room, and yet that sort of thing is being done. How ridiculous to hang an armorial tapestry, with its implications of a baronial hall and a vast establishment, in the small library of a New York apartment. If a tapestry is worth hanging, it is worth studying and worth treating with intelligent respect. And on this the architect who is protecting his plans must insist.

Phyllis Ackerman.

The French Ministry of Agriculture has published a volume entitled *Modèles—Types de Constructions Agricoles*, containing designs of farm-houses to be built in place of those destroyed during the war; and to lovers of the picturesque it is gratifying to note that these designs retain the local characteristics of the older farmsteads of the several districts in Northern France. Here are two examples, each typical of a particular locality: Drawing No. 1 is the street elevation of a type of farm-house intended for a district where stone of a certain kind is rather easily obtained. There is much charm in this very simple composition, notwithstanding that the illustration is a mere architectural drawing and not a pictorial one. It has the kind of charm that is inherent in the works of the Millet school of painting. The design is thoroughly expressive of the purpose of the simple dwelling—a place of rest after a good day's work. The whole façade is representative of the attitude of rest by its prevailing horizontality. There is not a single ornament and none is required. Does not the design in every feature remind one of the constant work of the forces of nature? Look at the texture of the wall: The jointing is a sort of ashlar-random in which the joints themselves form an interesting design in harmony with the lines of the climbing vines. The gradation observed in the distribution of stones—the larger at the bottom, the smaller at the top—and the variety in color that always exists in any quarry give the peasant's home a touch of the picturesque. Note the proportions of the windows, the difference between those of the first floor and those of the second: the unaffected beauty of symmetry, of balance. In any attractive design there are
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usually some curved lines; here the large wagon entrance is spanned with an arch which imparts to the whole an air of grace. The miracle realized in this design is due mainly to commonsense allied with the sense of proportion. Because the whole composition is horizontal enough, and would be suggestive of too great a calm if more horizontals were added, the verticality of the windows gives a sufficiently contrasting note of activity. The space between the windows indicates clearly the interior, in which the peasant loves to place his few beautiful pieces of furniture.

In drawing No. 2, the façade is plastered. We have no longer the picturesqueness of No. 1, but the charm of simplicity is here also. Only the structural quoins form the ornamental part of this design, stone, in the neighborhood for which this type is intended, being too expensive to be lavished on doors and windows. The importance attached to the cattle is vigorously written in both examples by the common roof given to the farmer and his horses, with the barn above them. In fact the former is subservient to the latter. The hard work and the deprivations of the French peasant are well accentuated, but it would be fairer to say "that these are the marks of his devotion to his work."

In other examples of these typical houses the artist has contrived to give a touch of grace to his design by simply alternating on his walls ashlar or pebbles with bricks. Wherever half timber is possible the degree of picturesqueness is increased. In each case financial considerations will dictate the proper material and forms. Everywhere there will be truth, an essential quality in a lasting art. No tattooing of ornament. In a way the hieroglyphics of the Egyptian column were interesting, but they formed a sort of tattooing on the surface of the shafts. More artistic, the Greeks tabooed this practice and allowed the shafts of their columns to run free all the way up, contenting themselves with the simple and beautiful effect of the fluting. Nature has permitted no useless ornaments to grow on man. The beauty of an arm is to be found in its very form and lines. The healthy and active one shows more strength, more power, than the idle one. The openness of look in the peasant is his best ornament, his consciousness of virile manhood. He knows how to smile, though a little oddly dressed. Qualities of the heart do not depend upon the attire for expression. This quality is very well expressed in drawing No. 2. You can picture yourself the neatness of such a white shelter basking in the sun with no other ornament than its whiteness and its green shutters. How reposeful they must look. Tomorrow, when the farmers are again visited with the prosperity of the days preceding the war, new additions will be made to the present schemes. Those may display, not more luxury, but more refined craftsmanship. I cannot forget the wonderful feats of carpentry seen on the dormers of dwellings in the towns scattered along the valley of the Loire, which are still today the most patent proofs of the love of work for work's sake of which the Frenchman has always been possessed.

DAVID VABON.

NO. 1. FROM "MODELES-TYPES DE CONSTRUCTIONS AGRICOLES."